UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/251,592	02/17/1999	RANDALL W. ROBERTS	19210/106/10	3407

EXAMINER	
JACOBSON, TONY M	

ART UNIT	PAPER NUMBER
2644	12

21186 7590 01/29/2004

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. BOX 2938
MINNEAPOLIS, MN 55402

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No. 09/251,592	Applicant(s) ROBERTS ET AL.	
	Examiner Tony M. Jacobson	Art Unit 2644	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 02 January 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☐ The period for reply expires _____months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *Applicant's agruments are unpersuasive*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: *None*.

   Claim(s) objected to: *None*.

   Claim(s) rejected: *1-20*.

   Claim(s) withdrawn from consideration: *None*.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☒ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). *9*.

10. ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement submitted on 02 September 2003, paper no. 9, was inadvertently omitted from the mailing of the prior Office action. A copy of the Form 1449, marked as being considered and initialed by the examiner, is included with this mailing.

Response to Arguments

2. Applicant's arguments filed 02 January 2004 have been fully considered but they are not persuasive.

3. Regarding Applicant's argument disagreeing with examiner's statement that the arbitrary partitioning of the invention in claims 1 and 6 to distinguish the active low-pass filter from other unspecified signal processing functions does not constitute novelty on the grounds that "an arbitrary partitioning" is not recited in the claims, the examiner did not state that such a limitation was recited in the claims; rather, the statement characterizes the formulation of the claim limitations. Since the preamplifier (2), filter (3), and output amplifier (4) of Fig. 1 of Ribic each constitute "signal processing" stages or elements as broadly as disclosed and claimed, the claiming of a signal processing stage in addition to these signal processing elements amounts to an arbitrary partitioning of the invention, which has no patentable weight.

4. Regarding Applicant's arguments that Sogn et al. and Northeved et al. do not teach or suggest an active low-pass filter with adjustable overshoot adapted to tunably match a measured resonance curve to provide a substantially smooth insertion gain frequency response, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Ribic discloses a hearing aid having a low-pass filter with and adjustable "overshoot"; Sogn et al. teaches utilizing a filter element having an underdamped low-pass response (a low-pass response with an "overshoot") in a hearing aid to restore the natural resonance response that is lost or altered when a hearing aid is inserted into the ear canal of a patient, assuming in one embodiment an average resonance peak ("overshoot") frequency for all patients, but also teaching providing a response that is individually tuned or selected to match a particular patient's natural acoustic meatus transfer function ("resonance curve") (see column 4, lines 37-53); Northeved et al. teaches measuring the resonance response curve of a patient with and without the hearing aid in place in order to determine the insertion gain of a hearing aid in use, and the use of that insertion gain data to adjust the hearing aid gain frequency response, with Fig. 4 fairly suggesting a substantially smooth insertion gain frequency response. The matching of the response peak ("overshoot") of the filter response curve to restore the natural resonance of the patient's meatus as taught by Sogn et al. inherently equates to providing a substantially smooth insertion gain frequency response, whether or not those particular words are recited by Sogn et al.

Northeved et al. states at column 4, lines 13-20, "On the basis of this frequency-dependent insertion gain, an expert can evaluate whether the hearing aid is set correctly, or whether the frequency response must be adjusted. After a possible adjustment of the hearing aid, the whole of the measuring procedure can be repeated until the insertion gain is suitable in relation to the hearing impairment that the person has in the relevant ear." Since the required insertion gain to correct a typical hearing loss is a substantially smooth function of frequency (i.e. it does not change abruptly between adjacent frequencies) as was well known in the art at the time the present invention was made, the corresponding required insertion gain frequency response would inherently be a substantially smooth curve also.

5. Regarding Applicant's arguments that Sogn et al. teaches away from the instant invention because it points out disadvantages of electrical filtering, such as increased space requirements, electrical power consumption, and added expense, and consequently teaches an acoustic filter instead of an electrical filter, and that it is therefor improper to combine Ribic and Sogn et al., the simplified active low-pass filter of Ribic at least partially overcomes some of these typical disadvantages of electrical filters, as indicated at column 1, line 12 –column 2, line 10. Regardless, the teaching of setting the peak ("overshoot") of an underdamped low-pass filter response in a hearing aid to restore the natural resonance of a patient's ear canal, which is altered upon insertion of a hearing aid therein (which inherently provides a substantially smooth insertion gain frequency response), is equally applicable to the electrical filter of Ribic as

to the mechanical-acoustic filter of Sogn et al., independent of the additional teaching of certain advantages of a mechanical-acoustic filter means.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony M. Jacobson whose telephone number is (703) 305-5532. The examiner can normally be reached on Mon. -Fri. 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

tmj
January 22, 2004

MINSUN OH HARVEY
PRIMARY EXAMINER